

1 IMPROVING FETCH OPERATIONS IN A
2 DISK DRIVE CONTROL SYSTEM

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4 ABSTRACT

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6 A method and system for improving fetch operations between a micro-controller
7 and a remote memory via a buffer manager in a disk drive control system comprising a
8 micro-controller, a micro-controller cache system having a cache memory and a cache-
9 control subsystem, and a buffer manager communicating with micro-controller cache
10 system and remote memory. The invention includes receiving a data-request from micro-
11 controller in cache control subsystem wherein the data-request comprises a request for at
12 least one of instruction code and non-instruction data. The invention further includes
13 providing the requested data to micro-controller if the requested data reside in cache
14 memory, determining if the received data-request is for non-instruction data if requested
15 data does not reside in cache memory, fetching the non-instruction data from remote
16 memory by micro-controller cache system via buffer manager, and bypassing cache
17 memory to preserve the contents of cache memory and provide the fetched non-
18 instruction data to micro-controller.